

SOLID ELECTROLYTIC CAPACITOR AND METHOD FOR MANUFACTURING

SOLID ELECTROLYTIC CAPACITOR

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BACKGROUND OF THE INVENTION

Field of the Invention

5 The present invention relates to a solid electrolytic capacitor and a method for manufacturing a solid electrolytic capacitor and, particularly, to a solid electrolytic capacitor which is constituted by forming at least a solid high molecular polymer electrolyte layer and a conductive layer on a foil-like valve metal substrate formed with an insulating oxide film on the surface thereof and can reduce the ESL and the ESR and increase electrostatic capacitance at a small size, and a method
10 for manufacturing such a solid electrolytic capacitor.

Description of the Related Art

15 An electrolytic capacitor is conventionally formed by employing a so-called valve metal capable of forming an insulating oxide film such as aluminum, titanium, brass, nickel, tantalum or the like as an anode, anodizing the surface of the valve metal to form an insulating oxide film thereon, forming an electrolyte layer substantially serving as a cathode, and forming a conductive layer of graphite, silver or the like as a cathode.

20 For example, an aluminum electrolytic capacitor is formed by employing as an anode a porous aluminum foil whose specific surface area is increased by etching, and providing a separation paper impregnated with an electrolytic solution between an aluminum oxide layer formed on the surface of the anode and a cathode foil.

25 In general, although an electrolytic capacitor using an electrolytic solution for an electrolyte layer between an insulating oxide film and a cathode has the disadvantage that its lifetime is determined by liquid leakage, evaporation of